

TWO NEW SPECIES OF *ESENBECKIA* (DIPTERA: TABANIDAE)
FROM MEXICO^{1,2}

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Abstract.—Two new species of *Esenbeckia* from Mexico are described and figured, *E. (Ricardoia) biclausa*, n. sp., from Hidalgo State is compared to *E. (R.) scionodes* Philip, and *E. (Esenbeckia) hirsutipalpus*, n. sp., from Nuevo Leon State is compared to *E. (E.) illota* (Williston).

The genus *Esenbeckia* Rondani with its four subgenera is an entirely American group of relatively primitive Pangoniini. The genus as a whole ranges from Argentina to southern United States, but the subgenera, except *Esenbeckia* itself, have more restricted ranges. Philip (1978) has recently reviewed, with keys to both sexes, the Mexican species, most of which belong to the subgenus *Ricardoia* Enderlein, a group which does not range south of Panama. Fairchild and Wilkerson (1981) give a detailed review of the subgenus *Proboscoides* Philip and have nearly completed a similar treatment of the nominate subgenus. The remaining subgenus, *Palassomyia* Fairchild contains but one peculiar Chilean species. Very little is known of the early stages or habits of any of the species. For the most part they seem to be rare and local; many are haematophagous, especially in the subgenus *Esenbeckia* and probably *Proboscoides*, while those in *Ricardoia* are often taken feeding on flowers. Philip's paper contains references to the pertinent literature, but is without figures, though most of the species have been figured by him or others in earlier publications.

The two species described here are peculiar in several ways and form interesting additions to the Mexican fauna. *Esenbeckia (Ricardoia) biclausa* is apparently close to *E. (R.) scionodes* Philip, having the same, hitherto

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unique, *Scione*-like venation, while males of *E. (Esenbeckia) hirsutipalpus* were reported by Philip (1978) as possibly the first records of *E. (E.) illota* from Mexico. The female collected by H. V. Weems, Jr., shows little similarity to *E. illota*, except for general coloration, but seems surely correctly associated with the sympatric males.

Esenbeckia (Ricardo) biclausia Wilkerson and Fairchild, NEW SPECIES

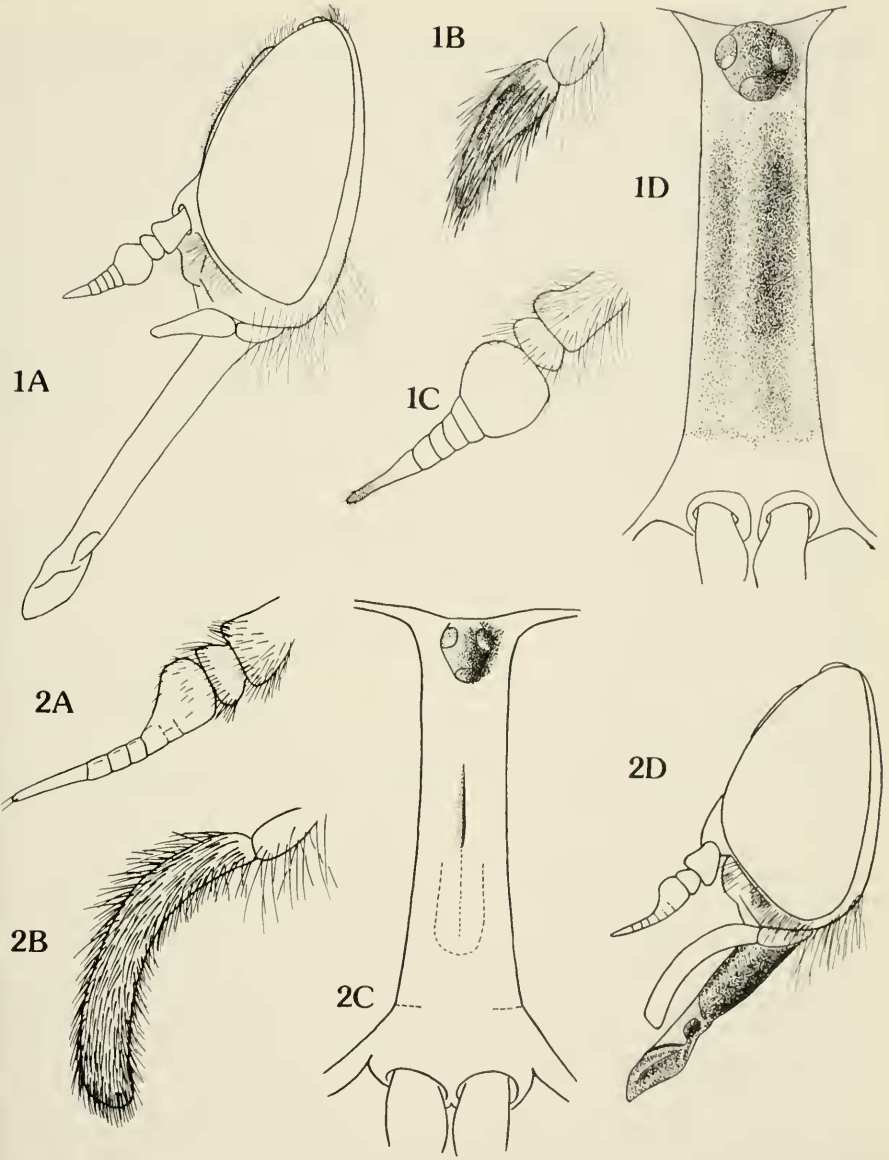
Figs. 1A-D

A blackish, yellow-haired, medium-sized, robust, beelike fly with an orange antennal flagellum, and short, wholly hairy, pointed palpi. Legs bicolored, femora blackish, tibiae yellow. Wings unpatterned but veins margined brown, 1st and 4th posterior cells closed and fork of 3rd vein with an appendix.

Female.—Length 12.5 mm; of wing 11.5 mm. Head structures as figured. Frons blackish in ground color, covered with gray pollinosity which is densest on the lower $\frac{1}{4}$. Frontal hairs as figured, all pale lemon yellow. Callus absent but a median raised ridge present. Ocellar tubercle prominent and black, bearing 3 reddish-brown ocelli. Subcallus, genae, and frontoclypeus blackish in ground color covered with dense gray pollinosity. Area around antennal sockets yellowish-brown pollinose. Oculogenal hairs pale lemon yellow. Beard of dense, pale lemon-yellow hairs. Antennal segments 1 and 2 yellowish brown in ground color, sparsely pale grayish-yellow pollinose with pale lemon-yellow hairs. Segment 3 orange, dusky at apex of last annulus. Palpal segment 1 blackish in ground color, pale yellow pollinose; segment 2 dark reddish brown which shows through thin yellowish pollinosity and shiny, pale yellow, bristle-like hairs. Second segment with deep groove on outer aspect. Proboscis wholly sclerotized, black, surface shiny but rough.

Mesonotum and scutellum black in ground color with dark gray pollinosity and quite dense, long, pale lemon-yellow hairs. Tufts of hairs at wing base and in front of scutellum whitish yellow. Ground color of pleura and coxae dark reddish brown with dark gray pollinosity and dense, long, pale lemon-yellow hairs. Femoral ground color dark reddish brown, yellowish brown at apical tips. Femora grayish pollinose with long, pale lemon-yellow hairs. Tarsi and apical tips of tibiae brown with pale lemon-yellow hairs. Tibiae yellow with pale lemon-yellow hairs. Basicosta bluntly pointed and blackish. Wings hyaline except for yellowish line along leading edge, especially in costal, subcostal, and 1st basal cells. All veins brown and brown margined. First and 4th posterior cells closed, fork of 3rd appendiculate. Halter reddish brown, dusky at tip of and base of knob.

Abdomen very dark shiny brown except for 1st segment which is dark gray pollinose. Setal vestiture of quite dense, pale lemon-yellow hairs which



Figs. 1A-D. *Esenbeckia (Ricardoia) biclausa*. 1A, Head, side view. 1B, Palp. 1C, Antenna. 1D, Frons. Figs. 2A-D. *Esenbeckia (Esenbeckia) hirsutipalpus*. 2A, Antenna. 2B, Palp. 2C, Frons. 2D, Head, side view.

are most numerous along segmental borders. Yellow color along borders accentuated by narrow strips of underlying pale yellow integumental color. Abdomen below as above but with hairs slightly longer and more numerous.

Male.—Length 15 mm; of wing 13 mm. Eyes contiguous. Ocellar tubercle at vertex prominent, bearing 3 distinct reddish-brown ocelli. Antennal flagellae missing. Palpi as female but slightly longer and curved. Proboscis more slender than female. Thorax, legs, and wings as female but hairs longer and more numerous and pollinosity with yellowish hue. Abdominal hairs as female but longer and more numerous both above and below. Ground color blackish on 1st tergum, middle $\frac{1}{3}$ of the 2nd and 3rd, and on all but apical borders of remaining terga. Lateral portions of terga 2 and 3 and apical borders of following segments reddish yellow. All segments grayish-yellow pollinose. Abdomen below as above but sternum 3 with lateral reddish-yellow areas.

Type material.—Holotype, ♀, Mexico, Hidalgo, Tepeapulco, 1-IX-1974, G. Bohart and W. Hanson coll. Allotype, ♂, Mexico, Hidalgo, Tepeapulco, 18-IX-1974, G. Bohart and W. Hanson coll. To be deposited in Florida State Collection of Arthropods (F.S.C.A.)

Discussion.—*Esenbeckia scionodes* Philip is apparently sympatric with and closely allied to *E. biclausa*, n. sp.; however, *biclausa* is more robust and lacks the lateral reddish areas on the first two abdominal terga. It also has shorter palpi which are blackish, with long pale yellow hairs, not orange with black hairs. The first annulus (basal plate) of the flagellum is also much wider than in *scionodes*, being half again as wide as the scape. In other respects, including leg coloration, overall body vestiture and coloration, and closure of the fourth posterior cell, the two species are quite close.

We place it in the subgenus *Ricardoia* on the basis of the short grooved palpi and the slender proboscis even though it, like *E. (Ricardoia) scionodes*, does have oculongenital hairs.

All specimens of the type-series of *E. scionodes* Philip do not have a completely closed 4th posterior cell. Of the 19 specimens, 7 were strongly narrowed and 3 "variously more opened" (Philip, 1973). One might expect this same variability in a larger series of *E. biclausa*.

Esenbeckia (R.) incisuralis (Say) is also a robust, yellow-haired, beelike species with darkened femora. The palpi of *E. incisuralis* are longer with a bare median groove, not short and wholly hairy; the antennal basal plate is narrower than *E. biclausa* and the 4th posterior cell is always open.

Esenbeckia (Esenbeckia) hirsutipalpus Wilkerson and Fairchild, NEW SPECIES
Figs. 2A-D

Esenbeckia illota: Philip 1978:350. In part, 2 ♂ reported from Nuevo Leon.

A medium-sized yellowish-brown species lacking a distinct callus, but with sabre-shaped palpi covered completely with long brown hairs; proboscis about equal to head height; pale fore- and midtibiae, and smoky brown wings. Abdomen brown, 1st segment contrastingly pale translucent yellowish white.

Female.—Length 14 mm; of wing 14.5 mm. Head structures as figured. Frons yellowish-brown pollinose, bearing on its lower $\frac{1}{2}$ a slight depression with a barely evident median ridge which extends upward into a small slightly denuded callus. Tubercle at vertex raised and bearing 3 dark red ocelli. Subcallus, genae, and frontoclypeus with brownish integument and yellowish-brown pollinosity; beard and other facial hairs dark brown. Antennal pedicel and scape yellowish-brown pollinose, flagellum pale yellow orange; antennal hairs dark brown. Palpi dark yellowish brown, densely covered with long dark brown hairs. Proboscis shiny brown.

Integument of mesonotum, scutellum, pleura, and coxae brown; yellowish-brown pollinose. Setal vestiture of numerous brown hairs, longer laterally, on scutellum and pleura. Hairs of thorax nearest head pale, yellowish. Femora and hindtibia and tarsus brown and brown haired; hindfemur slightly darker. Fore- and midtibiae and tarsi pale yellowish brown and short yellow haired. Halter yellowish brown. Wings with brownish tinge, darker in costal, subcostal, 1st basal, and base of marginal cells. Wing venation normal for genus.

Abdomen above brown and brown haired with 1st tergum translucent pale yellowish white and pale yellowish-brown haired. Extreme lateral borders of terga 2–7 blackish; posterior borders of terga 3–7 darkened. Below as above but without lateral darkening and with posterior borders of sterna 2–6 dark.

Male.—Length 13 mm; of wing 13 mm. Similar to female but paler overall. Head, thoracic, and leg hairs long, pale yellowish brown; those of 1st abdominal tergum pale yellow, remaining abdominal hairs pale brown. Eyes contiguous, a distinct raised tubercle bearing 3 ocelli at vertex. Palpi similar to female, but shorter, slender, and curved. Palpal hairs numerous, long, and reddish brown. Proboscis short, little more than $\frac{1}{2}$ head height, only $\frac{1}{3}$ again as long as palp. Abdomen as female, segment 1 pale yellow translucent, lateral borders on terga 2–7 darkened.

Type material.—Holotype, ♀, Mexico, Nuevo Leon, Chipinque Mesa, 18-VI-1976, H. V. Weems coll. To be deposited in F.S.C.A. Allotype, ♂, Mexico, V. deSantiago, N. L. (Nuevo Leon), H. Hedderich coll. Cornelius B. Philip collection in California Academy of Sciences San Francisco (C.A.S.). Determined as *Esenbeckia* sp. nr. *illota* by C. B. Philip, 1957. Paratype, ♂, Mexico, Apodaca, N.L., A. Salazar coll., in collection C. B. Philip in C.A.S. determined as *E. illota* in 1954 and *E. sp. nr. illota* in 1957 by C. B. Philip.

Discussion.—*Esenbeckia hirsutipalpus* is similar to *E. illota* (Williston)

in that both are medium sized straw-colored to brown species with smoky brown wings and the first abdominal segment translucent horn colored. The palpi of the two are strikingly different in both sexes; however, those of *hirsutipalpus* are wholly long haired, and those of *illota* are short haired and mostly bare on the outer aspect. In addition, *hirsutipalpus* has a stouter and much shorter proboscis, and lacks a distinct shiny frontal callus.

LITERATURE CITED

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